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July 16, 1997

Commissioner of Patents
BOX NO FEE
Washington, D.C. 20231

APPLICANT:	William George Wilhelm
SERIAL NO.	08/820,496
FILED:	March 19, 1997
FOR:	HIGH EFFICIENCY LIGHTING SYSTEM
EXAMINER:	To be assigned
ART UNIT:	2502

SIR:

Enclosed please find Rule 56 Disclosure Document and Form PTO-1449 with references in connection with the above identified application, as well as Certificate of Mailing.

Please acknowledge receipt on the enclosed postcard.

Respectfully submitted,

Alfred M. Walker
Reg. No. 29,983

CERTIFICATE OF MAILING

I hereby certify that the attached correspondence is being deposited with the United States Postal Service as first class mail addressed to:

COMMISSIONER OF PATENTS AND TRADEMARKS
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WASHINGTON DC 20231

on the date indicated below:

Date: July 18, 1997

Joyce Peterson

IN THE UNITED STATES PATENT OFFICE

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RULE 56 DISCLOSURE STATEMENT

The field of the invention is high efficiency uninterruptable lighting systems.

Uninterruptable power supplies are well known accessories especially when applied to computer equipment to "ride out" brief power outages so that no data is lost or compromised. Some have more battery storage capability so that operation may be maintained for an extended outage. Some special lighting systems are also protected in a similar fashion by an uninterruptable power source for critical applications such as operating rooms in hospitals. In lieu of such systems, reduced amounts of auxiliary emergency lighting is provided for special areas by modular systems which are only engaged during power outages; these modules are often used in stairwells and consist of a housing enclosing a battery, charger, power sensor and one or two flood lamps.

These prior art systems do nothing to enhance lighting efficiency, and would not be considered as substitutes for conventional lighting.

My U.S. Patent No. 5,500,561 of March 18, 1996 is directed to A CUSTOMER SIDE POWER MANAGEMENT SYSTEM AND METHOD and discloses several embodiments wherein substantial relaxation is achieved in the requirement that an electric or public utility maintain a generating capacity far exceeding the anticipated maximum demand for electricity.

Generally speaking, my patent and prior applications are directed to systems wherein a direct current power supply means in the form of storage battery means is included in the power management system and operates to alleviate excessive power demands on the electric utility.

Briefly stated, the problem addressed in my copending applications is, at its heart, based upon the fact that power demands placed upon the electric utilities by consumers fluctuate enormously dependent upon the time of day, the day of the week, the season of the year and/or any other factor which may affect demand, including the type of consumer. So-called uninterruptible power supplies have been proposed but are generally inadequate to alleviate the problem in a proper and efficient manner. Such a system is exemplified by the Lavin et al patent 5,289,045 of Feb. 22, 1994 and attention is called to the references cited as prior art against my aforesaid prior applications.

Various other prior art patents include U.S. Patent no. 2,194,822 of Dannheiser which discloses an emergency power system, and U.S. Patent no. 4,206,608 of Bell, which discloses a natural energy conversion, storage and electricity generation system.

U.S. Patent no. 4,315,163 of Bienville discloses a multipower electrical system for supplying electrical energy to a house of the like and U.S. Patent no. 4,349,863 of Petersen discloses an emergency lighting system.

U.S. Patent no. 4,464,724 of Gurr describes a system and method for optimizing power shed/restore operations and U.S. Patent no. 4,508,996 of Clegg discloses a high frequency supply system for gas discharge lamps and electronic ballast therefrom. U.S. Patent no. 4,551,980 of Bronicki discloses a hybrid system for generating power and U.S. Patent no. 4,630,005 of Clegg discloses an electronic inverter, particularly for use as a ballast.

U.S. Patent no. 4,663,723 of Umeda discloses a demand estimation apparatus, while U.S. Patent no. 4,682,078 of Pascalide discloses a wireless emergency lighting unit.

Furthermore, U.S. Patent no. 4,731,547 of Alenduff discloses a peak power sharing apparatus and method and U.S. Patent no. 4,742,291 of Bobier discloses an interface control for storage battery based alternate energy systems.

U.S. Patent no. 4,821,166 of Albach discloses a power-supply circuit in general, and U.S. Patent no. 4,894,764 of Meyer discloses a modular AC output battery load leveling system. U.S. Patent no. 5,053,635 of West discloses an uninterruptible power supply with a variable speed drive driving a synchronous motor/generator.

Moreover, U.S. Patent no. 4,426,587 of Nouet describes a power supply distribution system, U.S. Patent no. 4,860,185 of Brewer describes an integrated uninterruptible power supply for personal computer, U.S. Patent no. 5,089,937 of Carrubba describes a power interface apparatus for a DC power distribution system; U.S. Patent no. 5,164,609 of Poppe describes a controllable power distribution system; U.S. Patent no. 5,268,850 of Skoglund describes an automatic power-failure and auxiliary generator control, and U.S. Patent no. 5,532,525 of Kaiser describes a congeneration power system.

The present invention includes a high efficiency lighting system for maintaining normal lighting conditions by lighting fixtures requiring DC electrical power.

The system includes a power control means for receiving AC electrical power from a grid source and delivering required low voltage DC electrical power to the lighting fixtures. The power control means converts the AC electrical power to DC electrical power.

A battery provides, on a standby basis, the required DC low voltage electrical power to the power control means. The battery is connected to the power control means so that the battery may be maintained in a fully charged condition

by the power control means during normal supply of AC electrical power from the grid source.

The power control means delivers required DC electrical power from the battery to the lighting fixtures during an AC electrical power outage to maintain the power without interruption.

The power control means can be a plurality of multiple power control means, each connected to its own battery for maintaining the lighting in a building with multiple rooms.

An optional photovoltaic source of DC electrical power may be connected to the power control means for reducing the amount of electrical power taken from said grid source.

The battery provides, on a standby basis, DC low voltage electrical power to the power control means, which power control means maintains the battery in a fully charged condition by electrical power from an AC grid source.

In a version using AC power input only without an auxiliary battery or photovoltaic panel, the high efficiency lighting system for maintaining normal lighting conditions of lighting fixtures requiring DC electrical power, includes the power control means for receiving AC electrical power from a grid source and delivering required DC electrical power to the lighting fixtures, as well as a power control means converting AC electrical power to DC electrical power.

In a further embodiment for remote use, such as a remote campsite without access to conventional AC power, a high efficiency lighting system maintains normal lighting conditions of lighting fixtures requiring DC electrical power. The remote system includes a power control means for receiving DC electrical power from a photovoltaic panel and delivering required low voltage DC electrical power to the remote lighting fixtures, and the power control means controls charging of a battery.

The battery also provides, on a standby basis, the required DC low voltage electrical power to the power control means. It is connected to the power control means

while being maintained in a charged condition by the power control means, during daylight hours of input of power from the photovoltaic panel.

Moreover, the power control means delivers required DC electrical power from the battery to the lighting fixtures during periods of time when power from the photovoltaic panel is not available, such as at night times.

Applicant submits for consideration by the Examiner the enclosed references cited on the PTO1499 form. A copy of the foregoing references in bold are enclosed. The remaining references can be found in my pending application serial no. 08/606,219.

Applicant submits this document for consideration before the mailing date of a first office action on the merits.

Respectfully submitted,

Dated: July 16, 1997

Alfred M. Walker
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225 Old Country Road
Melville, NY 11747
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a:Adisc/lighting-pat56

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